

**Notic of Allowability**

Application N .

10/091,630

Examiner

Frantz F. Jules

Applicant(s)

CHUNG, I-CHAO

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**-- Th MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01/02/2004.
2. ☒ The allowed claim(s) is/are 1-3, 7-9, 15 and 18-22.
3. ☒ The drawings filed on 11 August 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
  - \* Certified copies not received: \_\_\_\_\_.
5. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
  - (a) ☐ The translation of the foreign language provisional application has been received.
6. ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

7. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
8. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No. \_\_\_\_\_.
  - (b) ☐ including changes required by the proposed drawing correction filed \_\_\_\_\_, which has been approved by the Examiner.
  - (c) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No. \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the margin according to 37 CFR 1.121(d).

9. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |  |   |
|--|---|
| 1 <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                             | 5 <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)          |
| 2 <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                    | 6 <input type="checkbox"/> Interview Summary (PTO-413), Paper No. _____             |
| 3 <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No. _____  | 7 <input type="checkbox"/> Examiner's Amendment/Comment                             |
| 4 <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8 <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
|  | 9 <input type="checkbox"/> Other  |

### REASON FOR ALLOWANCE

1. Higbee discloses a wheel end assembly comprising a spindle defining an axis of rotation, a first wheel hub supported on said spindle by at least one first bearing, a second wheel hub supported on said spindle adjacent to said first wheel hub (22) by at least a second bearing member for rotation about said axis; and at least one bushing mounted between the first and second wheel hubs and radially engaging the first and second wheel hubs relative to the axis to support axial and radial loads between the first and second wheel hubs thereby permitting said first and second wheel hubs (22, 18) to rotate independently from each other. Ash discloses a wheel end assembly comprising a spindle defining an axis of rotation, a first wheel hub supported on said spindle by at least one first bearing, a second wheel hub supported on said spindle adjacent to said first wheel hub by at least a second bearing member for rotation about said axis; and at least one third bearing member mounted between the first and second wheel hubs to permit said first and second wheel hubs to rotate independently from each other. Altemus discloses a tiltable and independently rotatable dual wheel assembly for trucks comprising a center coupling member with keys on the opposing faces to cooperate with keyways on a fixed member. Durham et al are cited to show a related dual wheel assembly comprising an annular housing sheet positioned between the first and second wheel hubs to permit independent rotation of the wheels. However, none of the references of record suggests a wheel end assembly comprising at least one bushing mounted between first and second wheel hubs, wherein said bushing axially and radially engages the first and second wheel hubs to support axial and radial loads

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between the first and second wheel hubs thereby permitting the first and second wheel hubs to rotate independently from each other in the manner defined in the instant claim 1. Also, none of the references of record suggests a wheel end assembly, wherein a middle wheel hub is positioned on an opposite side of a first and a second wheel hub, at least one third bearing mounted between the inner and middle wheel hubs to permit said inner and middle wheel hubs to rotate independently from each other, whereby at least one fourth bearing member for allowing the third and second wheel hubs to rotate independently from each other with is provided, said fourth bearing member mounted between the second and third wheel hubs in the manner defined in the instant claim 20. Therefore, claims 2-3, 7-9, 15, 18-19, 21-22, depending therefrom are considered to be allowable.

### ***Conclusion***

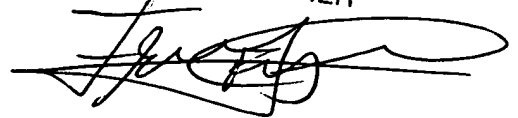
2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frantz F. Jules whose telephone number is (703) 308-8780. The examiner can normally be reached on Monday-Thursday and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph S. Morano can be reached on (703) 308-0230. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7687.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Frantz F. Jules  
Examiner  
Art Unit 3617

**FRANTZ F. JULES**  
**PATENT EXAMINER**  


FFJ

January 28, 2004